ABSTRACT

A biodegradable polyesteramide and preparation method, having a formulation that contains (a) a diacid: 30%~70% by weight (b) a diol: 10%~50% by weight (c) an amide: 5%~70% by weight (d) a diamine: 10%~70% by weight (e) a branching agent: 0%~10% by weight (f) a catalyst: an organic compound containing tin, 0ppm~50ppm total proportion by weight (g) an antioxidant: an aromatic antioxidant, 0%~5% by weight. A polycondensation reaction proceeds under nitrogen protection, and at a temperature of 140°C~270°C, and under this reaction temperature a vacuum polycondensation reaction proceeds for 4-6 hours, whereupon the biodegradable polyesteramide is acquired having a melting point of 125°C~130°C, a stretchability strength of 19~28Mpa, a fracture tensibility ratio of 80% ~ 300%. Under conditions where PH=12 and at a temperature of 80°C complete degradation can be realized. A structural formula for the biodegradable triblock polyesteramide is as below:

$$[OC(CH_2)_4 — COO(CH_2)_4O]_m[OC(CH_2)_4COHN(CH_2)_6NH]_n[OC(CH_2)_6NH]_p$$